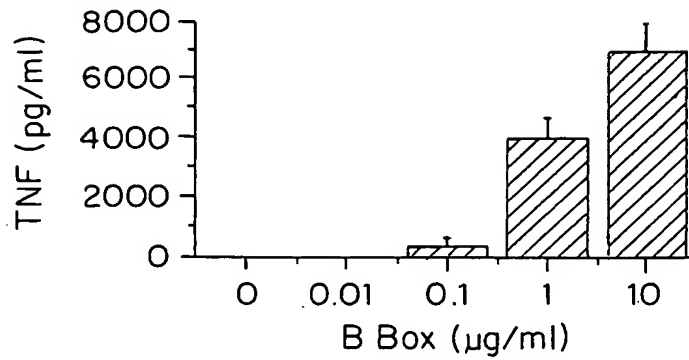
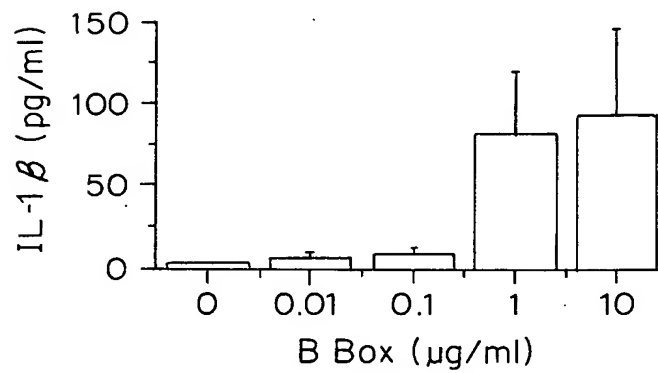


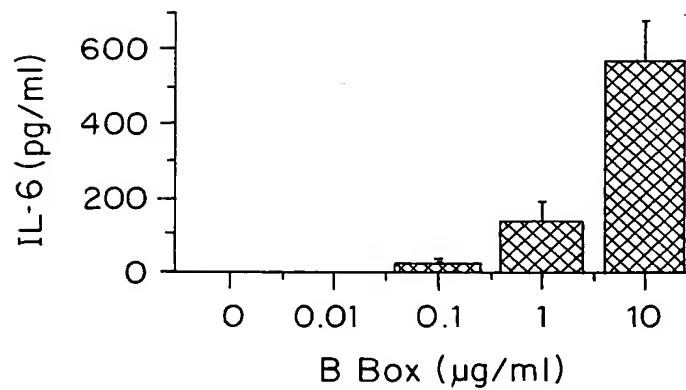
FIG. 1



**FIG. 2A**



**FIG. 2B**



**FIG. 2C**

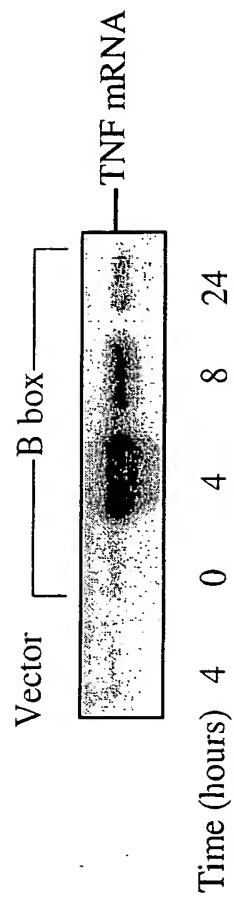
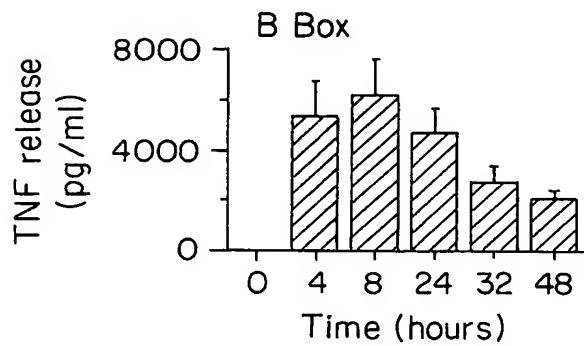
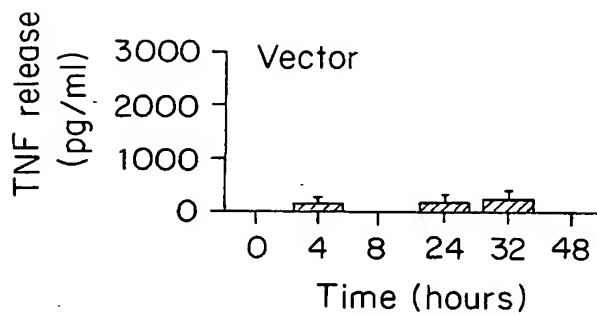


FIG. 2D

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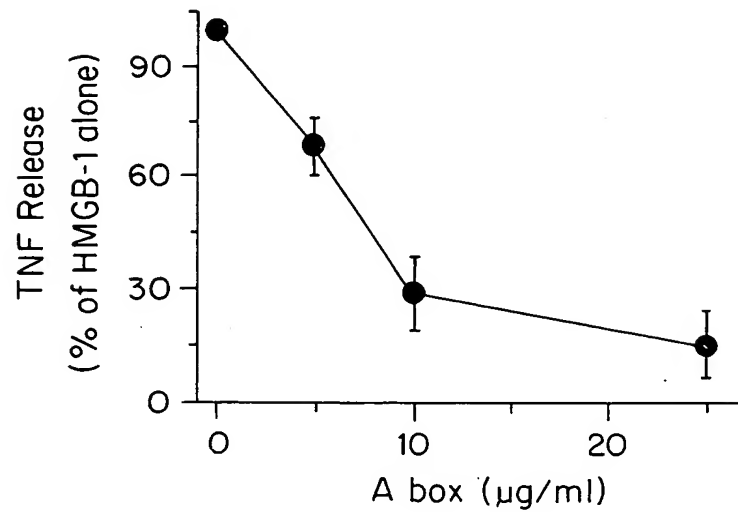
**FIG. 2E**



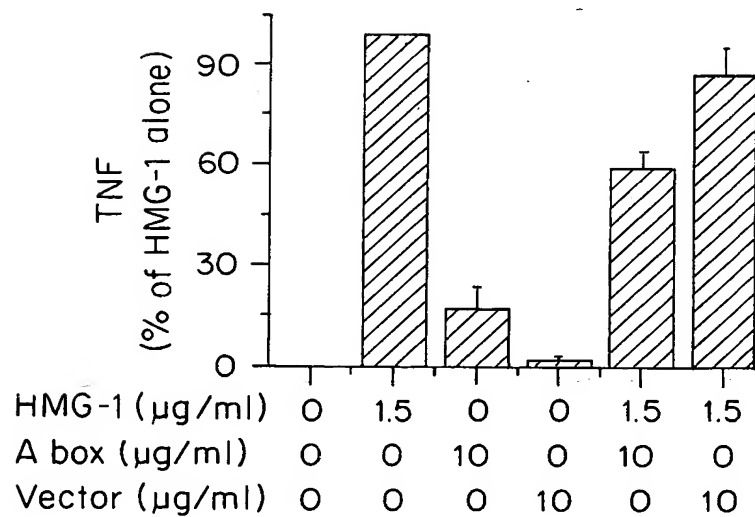
**FIG. 2F**

B box mutants	TNF release (pg/ml)
B box: 74 amino acids	5675±575
1-20	2100±756
16-35	100±10
30-49	120±75
45-64	100±36
60-74	100±20

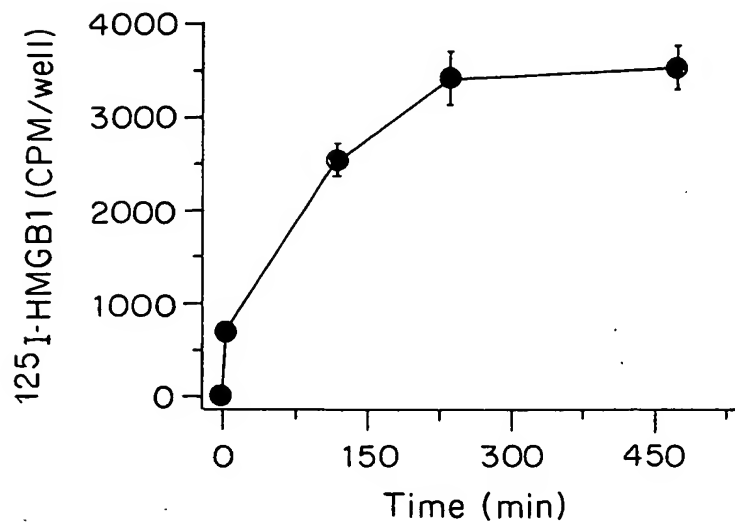
**FIG. 3**



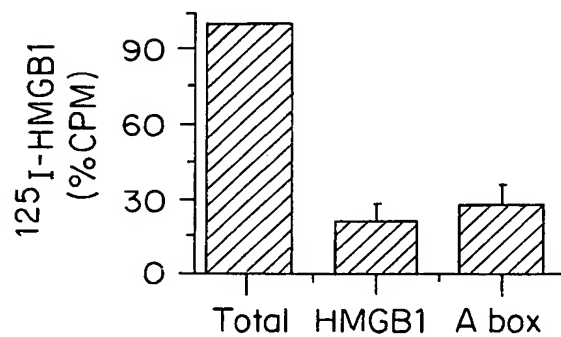
**FIG. 4A**



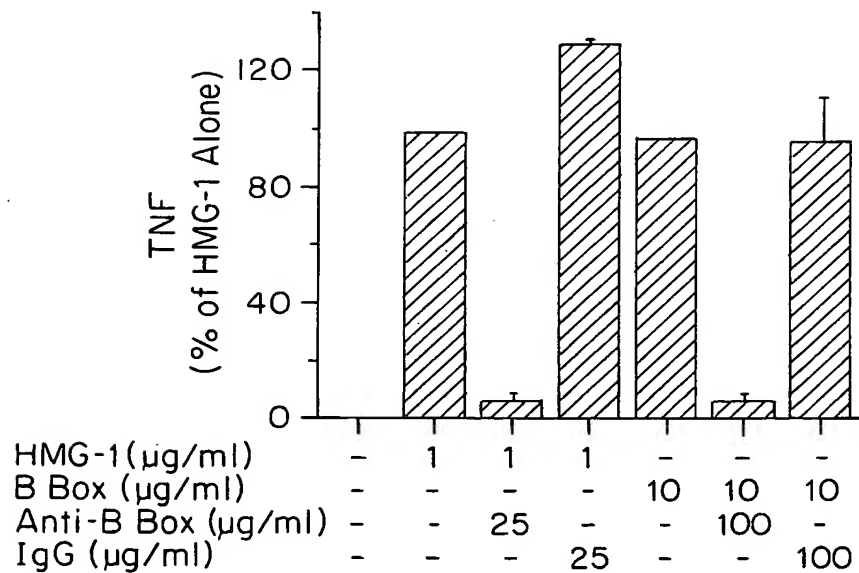
**FIG. 4B**



**FIG. 5A**



**FIG. 5B**



**FIG. 6**

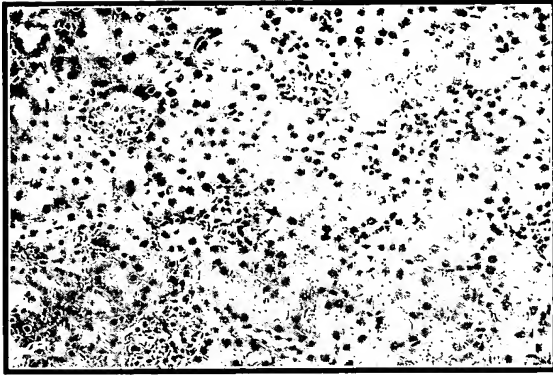


FIG. 7A

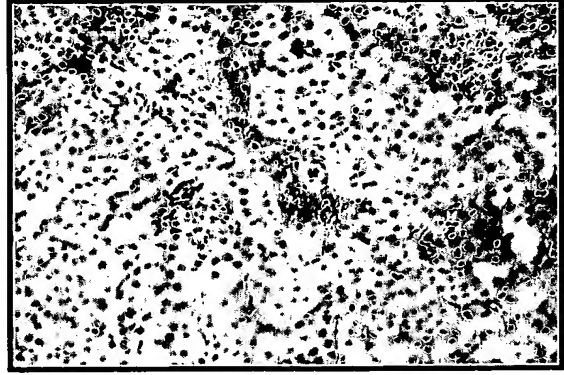


FIG. 7B

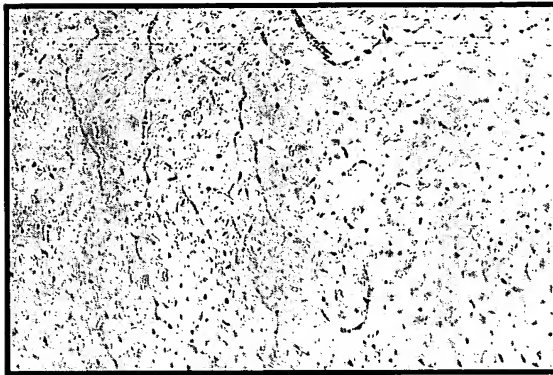


FIG. 7C

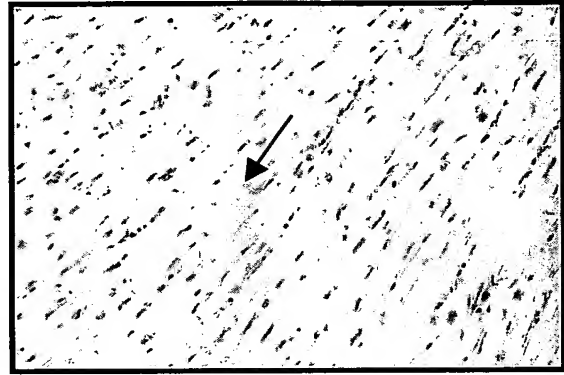


FIG. 7D

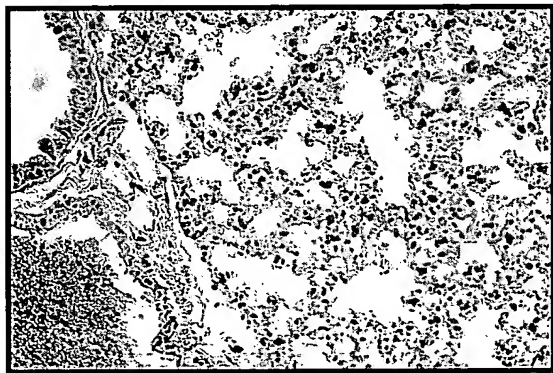


FIG. 7E

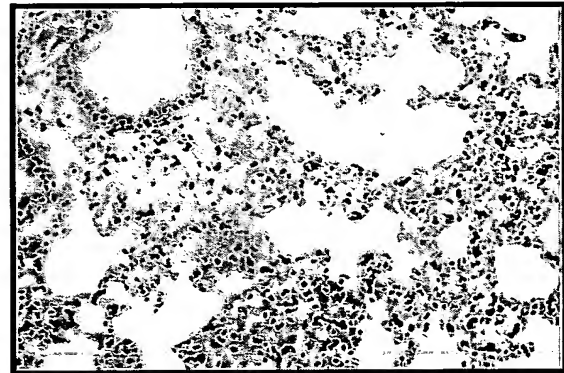


FIG. 7F

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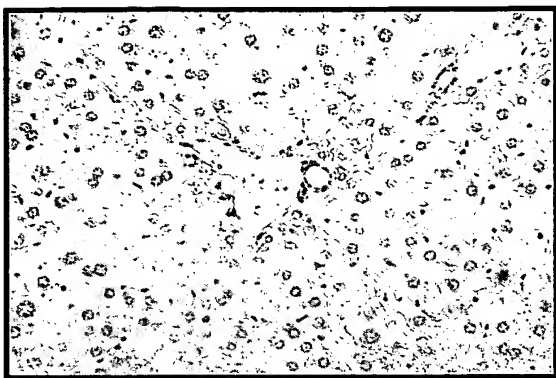


FIG. 7G

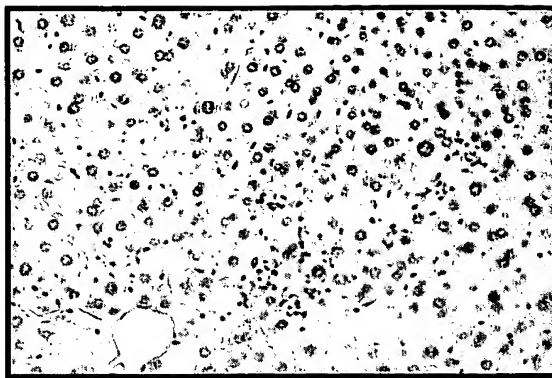


FIG. 7H

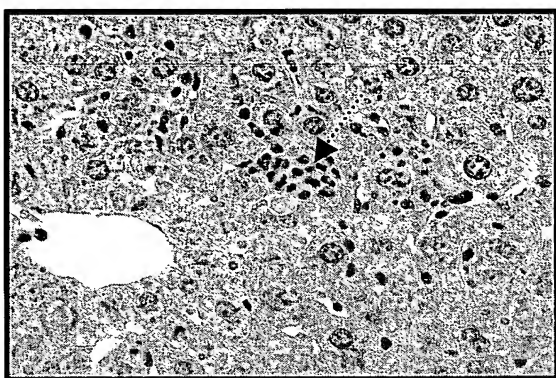


FIG. 7I

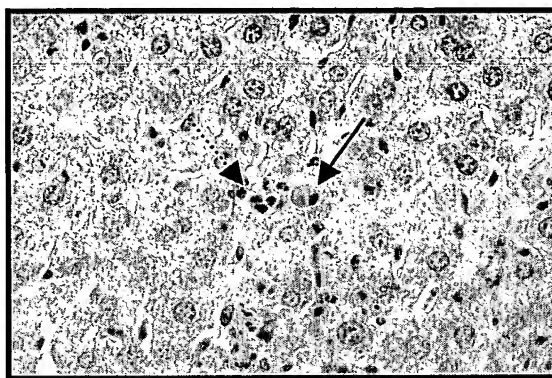
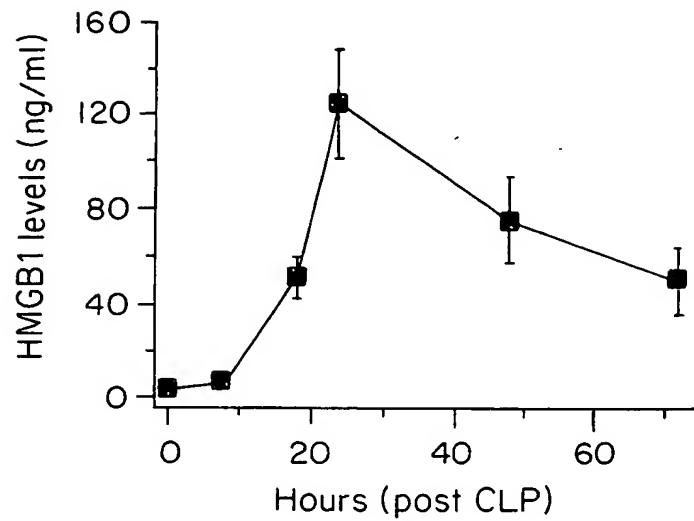


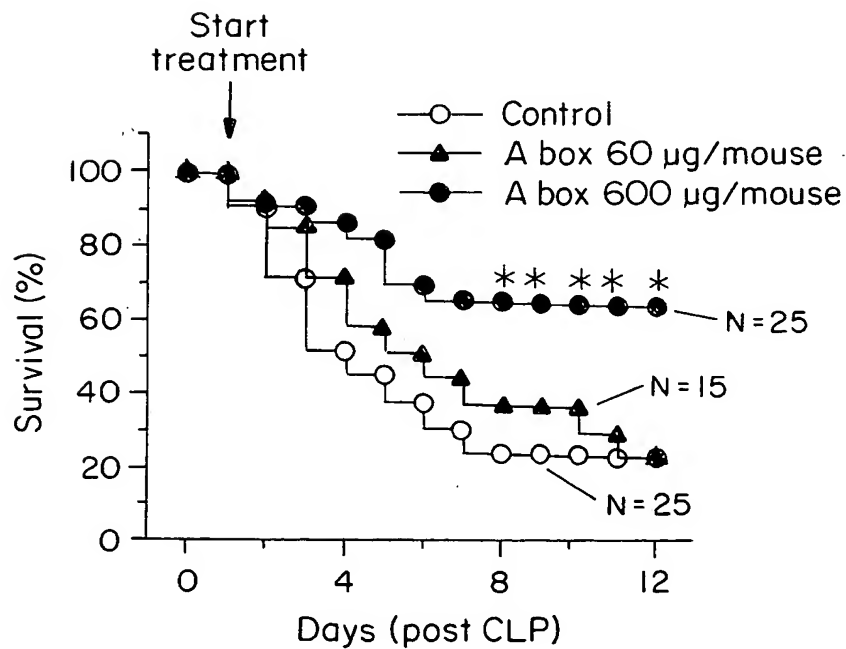
FIG. 7J

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**FIG. 8**



**FIG. 9**

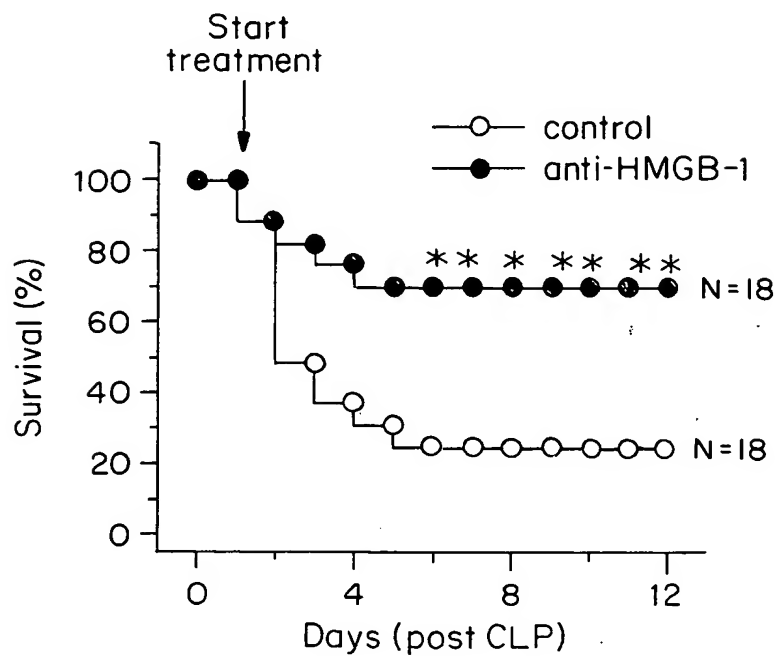


FIG. 10A

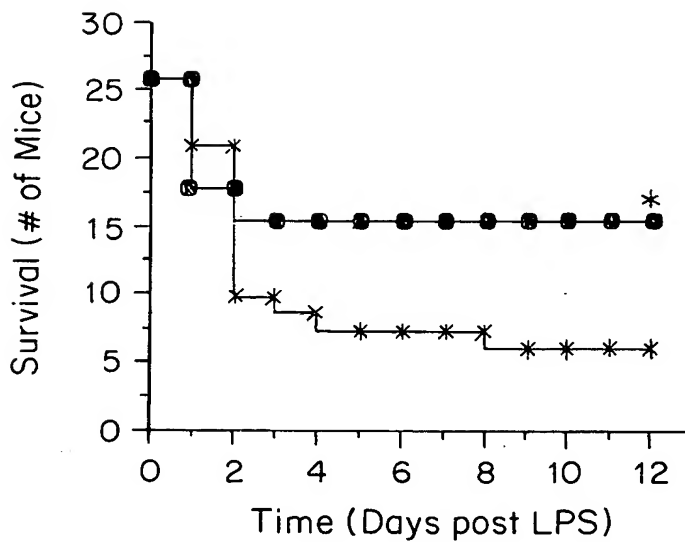


FIG. 10B

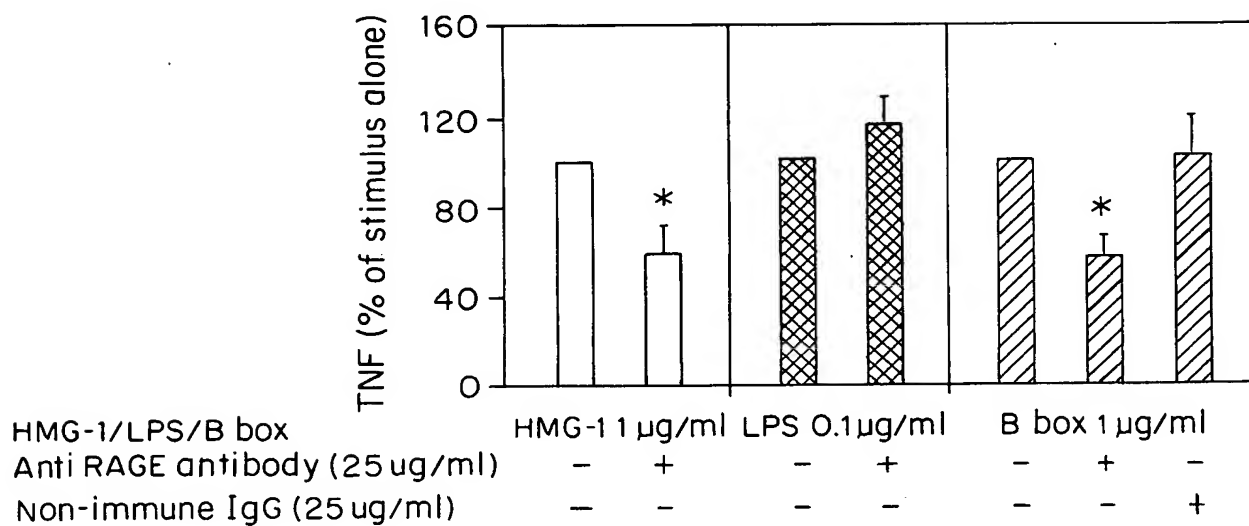


FIG. IIA

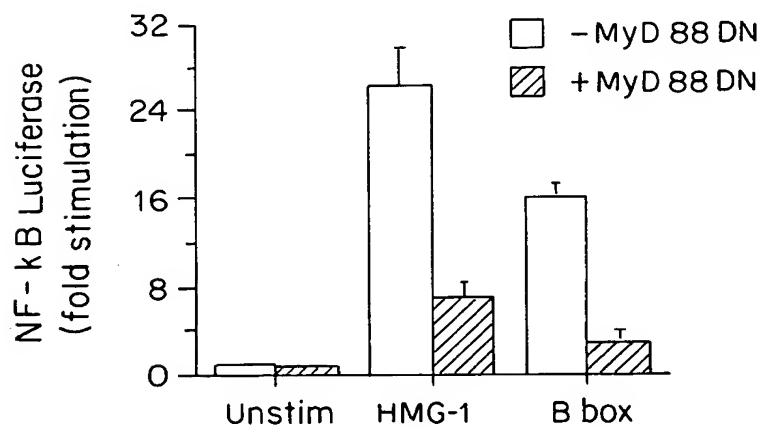


FIG. IIB

FIG. 12A

SEQ ID NO:1 - Human HMG1 amino acid sequence

1 mgkgdppkpr gkmssyaffv qcreehkkk hpdasvnfse fskkcserwk tmsakekgkf  
61 edmakadkar yeremktyip pkgetkkkfk dpnapkrpps afflfcseyr pkikgehppl  
121 sigdvakklg emwnntaadd kqpyekkaak lkekyekdia ayrakgkpa akkgvvkaek  
181 skkkkeeed eedeedeeee edeededeee dddde

FIG. 12B

SEQ ID NO:2 - Mouse and Rat HMG1 amino acid sequence

1 mgkgdppkpr gkmssyaffv qcreehkkk hpdasvnfse fskkcserwk tmsakekgkf  
61 edmakadkar yeremktyip pkgetkkkfk dpnapkrpps afflfcseyr pkikgehppl  
121 sigdvakklg emwnntaadd kqpyekkaak lkekyekdia ayrakgkpa akkgvvkaek  
181 skkkkeeedd eedeedeeee eeededeeee dddde

FIG. 12C

SEQ ID NO:3 - HUMAN HMG2 amino acid sequence

1 mgkgdppkpr gkmssyaffv qcreehkkk hpdssvnfae fskkcserwk tmsakekskf  
61 edmaksdkar ydremknyvp pkgdkkgkkk dpnapkrpps afflfcsehr pkiksehppl  
121 sigdtakklg emwseqsakd kqpyeqkaak lkekyekdia ayrakgksea gkkgpgrptg  
181 skkknepede eeeeeedeed eeededede

FIG. 12D

SEQ ID NO:4 - Human, mouse and rat HMG1 A box protein sequence

1 pdasvnfsef skkcserwkt msakekgkfe dmakadkary eremktyipp kget

FIG. 12E

SEQ ID NO:5 - Human, mouse and rat HMG1 B box protein sequence

1 napkrppsaf flfcseyrpk ikgehpplsi gdvakklgem wnntaaddkq pyekkaaklk  
61 ekyekdiaa

FIG. 12F

SEQ ID NO:6 - forward PCR primer for human HMG1

gatgggcaaaggagatcctaag.

FIG. 12G

SEQ ID NO:7 - reverse PCR primer for human HMG1

gcggccgcttattcatcatcatcttc

FIG. 12H

SEQ ID NO:8 - forward PCR primer for -C mutant of human HMG1

gatgggcaaaggagatcctaag

FIG. 12I

SEQ ID NO:9 - reverse PCR primer for -C mutant of human HMG1  
gcggccgctcacttgctttttcagccttgac

FIG. 12J

SEQ ID NO:10 - forward PCR primer for A+B boxes mutant of human HMG1  
gagcataagaagaagcaccca

FIG. 12K

SEQ ID NO:11 - reverse PCR primer for A+B boxes mutant of human HMG1  
gcggccgc tcacttgctttttcagccttgac

FIG. 12L

SEQ ID NO:12 - forward PCR primer for B box mutant of human HMG1  
aagttcaaggatcccaatgcaaag

FIG. 12M

SEQ ID NO:13 - reverse PCR primer for B box mutant of human HMG1  
gcggccgctcaatatgcagctatatccttttc

FIG. 12N

SEQ ID NO:14 - forward PCR primer for N'+A box mutant of human HMG1  
gatgggcaaaggagatcctaag

FIG. 12O

SEQ ID NO:15 - reverse PCR primer for N'+A box mutant of human HMG1  
tcactttttgtctccccttgagg

1 mgkgdppkpr gkmssyaffv qcreehkkk hpdasvnfse fskkcserwk tmsakekgkf *rat # P07155*  
1 mgkgdppkpr gkmssyaffv qcreehkkk hpdasvnfse fskkcserwk tmsakekgkf *mouse #AAA20508*  
1 mgkgdppkpt gkmssyaffv qcreehkkk hpdasvnfse fskkcserwk tmsakekgkf *human #AAA64970*

A box

61 edmakadkar yeremktyip pkgetkkkfk dnapkrpps afflcseyr pkikgehppl *rat*  
61 edmakadkar yeremktyip pkgetkkkfk dnapkrpps afflcseyr pkikgehppl *mouse*  
61 edmakadkar yeremktyip pkgetkkkfk dnapkrpps afflcseyr pkikgehppl *human*

B box

121 sigdvakklg emwnntaadd kqpyekkaak lkeyekdia ayrakgkpa akkgvvkaek *rat*  
121 sigdvakklg emwnntaadd kqpyekkaak lkeyekdia ayrakgkpa akkgvvkaek *mouse*  
121 sigdvakklg emwnntaadd kqpyekkaak lkeyekdia ayrakgkpa akkgvvkaek *human*

181 skkkkeeeedd eedeedeede eedeede deee dddde *rat*  
181 skkkkeeeedd eedeedeede eedeede deee dddde *mouse*  
181 skkkkeeeedd eedeedeede eedeedeede dddde *human*

FIG. 13

**FIG. 14A**

**NG\_000897 DNA (bases 150-797)**

ATGGGCAAAG	GAGATCCTAA	GAAGCCGACA	GGCAAAATGT	CATCATATGC
ATTTTTTTGTG	CAAACCTTGTC	GGGAGGAGCA	TAAGAAGAAG	CACCCAGATG
CTTCAGTCAA	CTTCTCAGAG	TTTTCTAAGA	AGTGCTCAGA	GAGGTGGAAG
ACCATGTCTG	CTAAAGAGAA	AGGAAAATTT	GAAGATATGG	CAAAGGCGGA
CAAGGCCCGT	TATGAAAGAG	AAATGAAAAC	CTATATCCCT	CCCAAAGGGG
AGACAAAAAA	GAAGTTCAAG	GATCCCAATG	CACCCAAGAG	GCTTCCTTCG
GCCTTCTTCC	TCTTCTGCTC	TGAGTATCGC	CCAAAAATCA	AAGGAGAACA
TCCTGGCCTG	TCCATTGGTG	ATGTTGCGAA	GAAACTGGGA	GAGATGTGGA
ATAACACTGC	TGCAGATGAC	AAGCAGCCTT	ATGAAAAGAA	GGCTGCGAAG
CTGAAGGAAA	AATACGAAAA	GGATATAGCT	GCATATCGAG	CTAAAGGAAA
GCCTGATGCA	GCAAAAAAGG	GAGTTGTCAA	GGCTGAAAAA	AGCAAGAAAA
AGAAGGAAGA	GGAGGAAGAT	GAGGAAGATG	AAGAGGATGA	GGAGGAGGAG
GAAGATGAAG	AAGATGAAGA	AGATGAAGAA	GAAGATGATG	ATGATGAA

**FIG. 14B**

**NG\_000897 Protein**

MGKGDPPKPT	GKMSSYAFFV	QTCREEHKKK	HPDASVNFSE	FSKKCSERWK
TMSAKEKGKF	EDMAKADKAR	YEREMKTYIP	PKGETKKKFK	DPNAPKRLPS
AFFLFCSEYR	PKIKGEHPGL	SIGDVAKKLG	EMWNNTAADD	KQPYEKKAAC
LKEKYEKDIA	AYRAKGKPD	AKKGVVKAEK	SKKKKEEEEED	EDEEDEEEEEE
EDEEDEEEDEE	EDDDDE			

**FIG. 14C**

**AF076674 DNA (bases 1-633)**

ATGGGCAAAG	GAGATCCTAA	GAAGCCGAGA	GGCAAAATGT	CATCATATGC
ATTTTTTTGTG	CAAACCTTGTC	GGGAGGAGCA	TAAGAAGAAG	CACTCAGATG
CTTCAGTCAA	CTTCTCAGAG	TTTTCTAACA	AGTGCTCAGA	GAGGTGGAAG
ACCATGTCTG	CTAAAGAGAA	AGGAAAATTT	GAGGATATGG	CAAAGGCGGA
CAAGACCCAT	TATGAAAGAC	AAATGAAAAC	CTATATCCCT	CCCAAAGGGG
AGACAAAAAA	GAAGTTCAAG	GATCCCAATG	CACCCAAGAG	GCCTCCTTCG
GCCTTCTTCC	TGTTCTGCTC	TGAGTATCAC	CCAAAAATCA	AAGGAGAACA
TCCTGGCCTG	TCCATTGGTG	ATGTTGCGAA	GAAACTGGGA	GAGATGTGGA
ATAACACTGC	TGCAGATGAC	AAGCAGCCTG	GTGAAAAGAA	GGCTGCGAAG
CTGAAGGAAA	AATACGAAAA	GGATATTGCT	GCATATCAAG	CTAAAGGAAA
GCCTGAGGCA	GCAAAAAAGG	GAGTTGTCAA	AGCTGAAAAA	AGCAAGAAAA
AGAAGGAAGA	GGAGGAAGAT	GAGGAAGATG	AAGAGGATGA	GGAGGAGGAA
GATGAAGAAG	ATGAAGAAGA	TGATGATGAT	GAA	

**FIG. 14D**

**AF076674 Protein**

MGKGDPPKPR	GKMSSYAFFV	QTCREEHKKK	HSDASVNFSE	FSNKCSEKWK
TMSAKEKGKF	EDMAKADKTH	YERQMKTYIP	PKGETKKKFK	DPNAPKRPPS
AFFLFCSEYH	PKIKGEHPGL	SIGDVAKKLG	EMWNNTAADD	KQPGKEKKAAC
LKEKYEKDIA	AYQAKGKPEA	AKKGVVKAEK	SKKKKEEEEED	EDEEDEEEEEE
DEEDEEDDDD	E			

**FIG. 14E**

**AF076676 DNA (bases 1-564)**

ATGGGCAAAG	GAGACCCTAA	GAAGCCGAGA	GGCAAAATGT	CATCATATGC
ATTTTTTTGTG	CAAACCTTGTC	GGGAGGAGTG	TAAGAAGAAG	CACCCAGATG
CTTCAGTCAA	CTTCTCAGAG	TTTTCTAAGA	AGTGCTCAGA	GAGGTGGAAG
GCCATGTCTG	CTAAAGATAA	AGGAAAATTT	GAAGATATGG	CAAAGGTGGA
CAAAGACCGT	TATGAAAGAG	AAATGAAAAC	CTATATCCCT	CCTAAAGGGG
AGACAAAAAA	GAAGTTCGAG	GATTCCAATG	CACCCAAGAG	GCCTCCTTCG
GCCTTTTTTGC	TGTTCTGCTC	TGAGTATTGC	CCAAAAATCA	AAGGAGAGCA
TCCTGGCCTG	CCTATTAGCG	ATGTTGCAAA	GAAACTGGTA	GAGATGTGGA
ATAACACTTT	TGCAGATGAC	AAGCAGCTTT	GTGAAAAGAA	GGCTGCAAAG
CTGAAGGAAA	AATACAAAAA	GGATACAGCT	ACATATCGAG	CTAAAGGAAA
GCCTGATGCA	GCAAAAAAGG	GAGTTGTCAA	GGCTGAAAAA	AGCAAGAAAA
AGAAGGAAGA	GGAG			

**FIG. 14F**

**AF076676 Protein**

MGKGDPPKKPR	GKMSSYAFFV	QTCREECKKK	HPDASVNFSE	FSKKCSERWK
AMSAKDKGKF	EDMAKVDKDR	YEREMKTYIP	PKGETKKKFE	DSNAPKRPPS
AFLLCSEYC	PKIKGEHPGL	PISDVAKKLV	EMWNNTFADD	KQLCEKKAAC
LKEYKKKDTA	TYRAKGKPD	AKKGVVKAEC	SKKKKEEE	

**FIG. 14G**

**AC010149 DNA (bases 75503-76117)**

ATGGACAAAG	CAGATCCTAA	GAAGCTGAGA	GGTGAAATGT	TATCATATGC
ATTTTTTTGTG	CAAACCTTGTC	AGGAGGAGCA	TAAGAAGAAG	AACCCAGATG
CTTCAGTCAA	GTTCTCAGAG	TTTTTAAAGA	AGTGCTCAGA	GACATGGAAG
ACCATTTTTTG	CTAAAGAGAA	AGGAAAATTT	GAAGATATGG	CAAAGGCGGA
CAAGGCCCAT	TATGAAAGAG	AAATGAAAAC	CTATATCCCT	CCTAAAGGGG
AGAAAAAAA	GAAGTTCAAG	GATCCCAATG	CACCCAAGAG	GCCTCCTTTG
GCCTTTTTTCC	TGTTCTGCTC	TGAGTATCGC	CCAAAAATCA	AAGGAGAACA
TCCTGGCCTG	TCCATTGATG	ATGTTGTGAA	GAAACTGGCA	GGGATGTGGA
ATAACACCGC	TGCAGCTGAC	AAGCAGTTTT	ATGAAAAGAA	GGCTGCAAAG
CTGAAGGAAA	AATACAAAAA	GGATATTGCT	GCATATCGAG	CTAAAGGAAA
GCCTAATTCA	GCAAAAAAGA	GAGTTGTCAA	GGCTGAAAAA	AGCAAGAAAA
AGAAGGAAGA	GGAAGAAGAT	GAAGAGGATG	AACAAGAGGA	GGAAAATGAA
GAAGATGATG	ATAAA			

**FIG. 14H**

**AC010149 Protein**

MDKADPPKKLR	GEMLSYAFFV	QTCQEEHKKK	NPDASVKFSE	FLKKCSETWK
TIFAKEKGKF	EDMAKADKAH	YEREMKTYIP	PKGEKKKKFK	DPNAPKRPP
AFLLCSEYR	PKIKGEHPGL	SIDDVVKKLA	GMWNNTAAAD	KQFYEKKAAC
LKEYKKKDIA	AYRAKGKPNS	AKKRVVKAEC	SKKKKEEEED	EEDEQEEENE
EDDDK				



**FIG. 14I**

**AF165168 DNA** (bases 729-968)

```
ATGGGCAAAG GAGATCCTAA GAAGCCGAGA GGCAAAATGT CATCATGTGC
ATTTTTTTGTG CAAACTTGTT GGGAGGAGCA TAAGAAGCAG TACCCAGATG
CTTCAATCAA CTTCTCAGAG TTTTCTCAGA AGTGCCCAGA GACGTGGAAG
ACCACGATTG CTAAAGAGAA AGGAAAATTT GAAGATATGC CAAAGGCAGA
CAAGGCCCAT TATGAAAGAG AAATGAAAAC CTATATACCC
```

**FIG. 14J**

**AF165168 Protein**

```
MGKGDPPKKPR GKMSSCAFFV QTCWEEHKKQ YPDASINFSE FSQKCPETWK
TTIAKEKGKF EDMPKADKAH YEREMKTYIP
```

**FIG. 14K**

**XM\_063129 DNA** (bases 319-558)

```
AAACAGAGAG GCAAAATGCC ATCGTATGTA TTTTGTGTGC AACTTGTCC
GGAGGAGCGT AAGAAGAAAC ACCCAGATGC TTCAGTCAAC TTCTCAGAGT
TTTCTAAGAA GTGCTTAGTG AGGGGGAAGA CCATGTCTGC TAAAGAGAAA
GGACAATTTG AAGCTATGGC AAGGGCAGAC AAGGCCCGTT ACGAAAGAGA
AATGAAAACA TATATCCCTC CTAAAGGGGA GACAAAAAAA
```

**FIG. 14L**

**XM\_063129 Protein**

```
KQRGKMPSYV FCVQTCPEER KKKHPDASVN FSEFSKKCLV RGKTMSAKEK
QQFEAMARAD KARYEREMKT YIPPKGETKK
```

**FIG. 14M**

**XM\_066789 DNA** (bases 1-258)

```
ATGGGCAAAA GAGACCCTAA GCAGCCAAGA GGCAAAATGT CATCATATGC
ATTTTTTTGTG CAAACTGCTC AGGAGGAGCA CAAGAAGAAA CAACTAGATG
CTTCAGTCAG TTTCTCAGAG TTTTCTAAGA ACTGCTCAGA GAGGTGGAAG
ACCATGTCTG TTAAAGAGAA AGGAAAATTT GAAGACATGG CAAAGGCAGA
CAAGGCCTGT TATGAAAGAG AAATGAAAAT ATATCCCTAC TTAAAGGGGA
GACAAAAA
```

**FIG. 14N**

**XM\_066789 Protein**

```
MGKRDPPKQPR GKMSYAFFV QTAQEEHKKK QLDASVSFSE FSKNCSEKWK
TMSVKEKGKF EDMAKADKAC YEREMKIYPY LKGRQK
```

**FIG. 14O**

**AF165167 DNA (bases 456-666)**

ATGGGCAAAG GAGACCCTAA GAAGCCAAGA GAGAAAATGC CATCATATGC  
ATTTTTTTGTG CAAACTTGTA GGGAGGCACA TAAGAACAAA CATCCAGATG  
CTTCAGTCAA CTCCTCAGAG TTTTCTAAGA AGTGCTCAGA GAGGTGGAAG  
ACCATGCCTA CTAAACAGAA AGGAAAATTC GAAGATATGG CAAAGGCAGA  
CAGGGCCCAT A

**FIG. 14P**

**AF165167 Protein**

MGKGDPPKKPR EKMPSYAFFV QTCREAHKNK HPDASVNSSE FSKKCSERWK  
TMPTKQKGKF EDMAKADRAH